

U.S. Application No. 10/537,632

Inventor: Hillforth, Mikael Title: AN APPARATUS FOR DETECTING ANIMALS

Group Art Unit: 3644; Examiner: Joseph W. Sanderson

Amendment Responsive to Office Action of August 25, 2009

Remarks

Entry of this amendment after issuance of the final rejection is courteously requested. The Office Action of August 25, 2009 raised issues presented for the first time regarding the recitation of “an animal of a normal size”. This recitation was included in claim 8 as initially filed with the application and had never been the subject of a prior rejection. Accordingly, consideration of this amendment after final is appropriate in view of the new ground of rejection raised in the final rejection.

Claims 2, 3, 7, 8, 11, 12 and 17-20 have been cancelled by this amendment. Thus, only claims 1, 4 through 6, 9, 10, and 13-16 remain in this application. Claim 1 is the only independent claim for consideration. Reconsideration and passage to allowance is courteously requested.

Claim 1 has been amended to clarify the limitation concerning the arrangement of the sensor device. In this regard, the recitation concerning the structure of the sensor device, i.e. “that the sensor device comprises first and second sensors . . .” now precedes the further definition of the sensor devices in that “the sensors of the sensor device are arranged to sense a parameter related to the width of the animal seen in a determined direction . . .”. Also, in order to address the newly raised issue concerning “an animal of a normal size,” applicants have amended claim 1 to delete the

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mention of a “normal size” and instead refer to “the animal to be guided through the animal passage.” This language has not been found objectionable in the current or previous office actions (see, e.g., “a sensor device which is arranged to sense the animal in the passage” as set forth in Claim 1 and addresses the concerns about the indefiniteness of the use of “normal size.”

In addition, Claim 1 has been amended to emphasize the unique structure and function of the present invention by reciting that “the sensor device is arranged to produce a signal when the parameter indicates that the width of the animal is less than a pre-determined value at the predetermined position, and thus to produce signals identifying the beginning and the end of the body part of the animal.”. Furthermore, claim 1 now recites that “ the control member and the processor being arranged to count the animals passing the animal passage in response to the sensing of the sensors, and thus in response to the signals identifying the beginning and the end of the body part of the animal.” Support for the inclusion of this language in claim 1 is found, for example, at page 3, lines 29-32 of the application.

Applicant has previously brought to the attention of the Examiner the significant goals and advantages of the present invention as set forth in claim 1, noting why the hypothetical combination of the prior art references would not lead one skilled in the art to find the claimed invention obvious. Those arguments are not repeated again here, but are incorporated by reference. However, it should be emphasized that the particular problem addressed by the present invention is that of identifying

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individual animals when a train of animals passes through an animal passage. This is particularly difficult in milking environments because of the nature of the animals to bunch or crowd into closely packed, "nose-to-tail" positions, or the even more difficult circumstances where the head of an animal is at least partly lying on the rump of the adjacent forward animal. Again, the Examiner's attention is invited to the recitation of this problem at page 3, last paragraph, and again at page 8, first paragraph, of the application as filed.

Here, the present invention as claimed solves this problem by providing an apparatus which provides a reliable identification of individual animals so that the animals passing along the animal passage can be detected and counted in a secure way. The solution developed by the present invention lies, at least in part, in the two sensors positioned at the same position with regard to the transport direction but separated from each other with a distance smaller than the width of the body part of the animal but larger than the width of the head part of the animal. With such sensors it is possible to identify an individual animal in the train of animals even if one animal has its head lying above the rear body part of a forward animal.

The primary reference relied upon in asserting the obviousness of the present invention is U.S. Patent No. 5,673,647. Pratt '647 does not explicitly disclose that a signal is produced when the width of an animal comes below a pre-determined value, nor is it inherent in its teachings. The production of a signal when the width of an animal comes below a pre-determined value is an

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important aspect of the present invention, since it enables the possibility of identifying the beginning and the end of the body part of the animal to be identified. Such a sensing is not disclosed, taught or suggested by Pratt. Similarly, Frey EP 0 561 071 does not explicitly or inherently disclose any sensing of the width in order to detect when the width comes below a pre-determined value. Consequently, the cited prior art does not disclose this very important feature of the claimed invention. Moreover, this problem did not confront the inventors of those references, is not discussed therein, nor is it solved by their teachings, either alone or in combination. Inasmuch as the problem of counting animals in a train of animals positioned very close to one another was not the subject of the concern of the prior art, and the structure and function of the present invention was not taught or suggested, it cannot be said that the present invention is a predictable result of this hypothetical combination.

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Applicant earnestly solicits entry of this amendment and submits that the amendment places this application in condition for allowance. Applicants attorney has endeavored to contact the examiner by telephone to discuss the application, and should the examiner have any issues which may be resolved by a telephone conference, they may be addressed to the undersigned at 1-800-445-3460. Any additional fees necessitated by this submission may be charged to Deposit Account 19-0522.

Respectfully submitted,

HOVEY WILLIAMS LLP

By



Thomas H. Van Hoozer, Reg. No. 32,761
HOVEY WILLIAMS LLP
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
(816) 474-9050

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